

## Claims

What is claimed is:

1. A method for Serial Presence Detect (SPD) content generation, comprising:  
receiving a memory module identification;  
querying a data store with the memory module identification for an SPD  
tokenized string;  
parsing the SPD tokenized string for SPD tokens; and  
generating SPD contents for each of the SPD tokens.
2. The method of claim 1 further comprising, transmitting the SPD contents to  
an Electrically Erasable Programmable Read-Only Memory (EEPROM)  
configuration module.
3. The method of claim 1 further comprising, executing the EEPROM  
generation program to produce a configured EEPROM on the memory module.
4. The method of claim 1 wherein the generating further includes evaluating an  
electronic version of an industry standard for generating the SPD contents with each  
of the SPD tokens.
5. The method of claim 4 wherein the evaluating further includes indexing into  
the electronic version of the industry standard with each of the SPD tokens.
6. The method of claim 5 wherein the indexing further includes obtaining  
select values for the SPD contents with each of the SPD tokens.
7. The method of claim 1 wherein the parsing occurs before the querying.

8. A method for Serial Presence Detect (SPD) contents fabrication, comprising:  
electronically representing an industry standard for generating SPD contents with SPD tokens, wherein each SPD token is associated with one or more values of the SPD contents;

associating strings of SPD tokens with memory modules;

housing the industry standard for memory modules and the strings of SPD tokens in one or more data stores; and

interfacing the one or more data stores with a SPD content creator, wherein the SPD content creator generates configuration contents for Electrically Erasable Programmable Read-Only Memory (EEPROM) on the memory modules in response to identifiers for the memory modules.

9. The method of claim 8 wherein the electronically representing further includes establishing one to many relationships between each of the SPD tokens one or more of the values

10. The method of claim 9 further comprising prompting, by the SPD creator, for selection of one of the one or more values.

11. The method of claim 8 further comprising:

electronically representing an industry standard for memory labels with label tokens;

associating the label tokens with memory modules; and

housing the industry standard for memory labels and the label tokens in the one or more additional data stores.

12. The method of claim 11 further comprising interfacing a label generator with the one or more additional data stores, which automatically generates labels in response to the identifiers for the memory modules.

13. The method of claim 8 wherein the processing occurs in any order.

14. A method for Serial Presence Detect (SPD) content generation, comprising:  
parsing SPD tokens for a given memory module;  
enforcing rules associated with a codified version of an industry standard for SPD content generation based on the identities of each of the tokens; and  
generating SPD contents for each of the SPD tokens in accordance with the enforced rules.

15. The method of claim 14 further comprising searching the codified version of the industry standard for each of the SPD tokens to acquire appropriate ones of the rules.

16. The method of claim 14 wherein the generating further includes identifying alternative values for a select number of the SPD contents when a select one of the rules permits.

17. A method to generate a Serial Presence Detect (SPD) content fabrication data store, comprising:  
associating SPD tokens with values associated with SPD contents;  
representing rules associated with selecting the values with respect to the SPD tokens; and  
housing the SPD tokens, the values, and the rules in a SPD content fabrication data store.

18. The method of claim 17 further comprising interfacing the SPD content fabrication data store with a SPD content creator.

19. The method of claim 18 further comprising interfacing the SPD content creator with an Electrically Erasable Programmable Read-Only Memory (EEPROM) configuration module.

20. A method to generate Serial Presence Detect (SPD) contents for an Electrically Erasable Programmable Read-Only Memory (EEPROM) on a memory module, comprising:

receiving a memory module identifier associated with a specific memory module;

obtaining a SPD token string representing a plurality of SPD tokens for the memory module using the memory module identifier as a search request to a first data store;

parsing each of the SPD tokens and using each of the SPD tokens as a new search request to a second data store, wherein the second data store includes rules associated with an electronic version of an industry standard for generating SPD contents of an EEPROM on the memory module;

enforcing the rules; and

generating values for the SPD contents based on rules.

21. The method of claim 20 further comprising prompting for select manual inputted values for a number of the values when dictated by the enforcement of a particular one of the rules.

22. The method of claim 20 further comprising transmitting the generated SPD contents to an EEPROM configuration module for configuring an instance of the EEPROM on the memory module.

23. A Serial Presence Detect (SPD) data structure, residing in a computer-accessible medium used to fabricate SPD contents, the SPD data structure comprising:

a plurality of SPD tokens, wherein each token is associated with one or more values for SPD contents; and

wherein each token is associated with one or more rules defined in a codified version of an industry standard for SPD content generation.

24. The SPD data structure of claim 23 further comprising an SPD string that includes a select number of the SPD tokens concatenated together.
25. The SPD data structure of claim 24 wherein the select number of the SPD tokens are arranged in any order within the SPD string.
26. The SPD data structure of claim 24 wherein the select number of the SPD tokens are arranged in a pre-defined order within the SPD string based on identifiers associated with the SPD tokens.
27. The SPD data structure of claim 23 wherein the SPD tokens are in an Extensible Markup Language (XML) data format.
28. A Serial Presence Detect (SPD) data structure, residing in a computer-accessible medium used to fabricate SPD contents, the SPD data structure comprising:
- a plurality of SPD tokens;
  - a plurality of values associated with an industry standard for SPD content generation;
  - a plurality of rules for selecting select ones of the values; and
  - a plurality of links that associate the SPD tokens, the values, and the rules.
29. The SPD data structure of claim 28 wherein instances of the data structure are indexed and housed in a data store.
30. The SPD data structure of claim 28 wherein instances of the data structure define specific SPD contents for a specific memory module.
31. The SPD data structure of claim 28 wherein instances of the data structure are consumed by an SPD content creator, wherein the SPD content creator generates

SPD contents for Electrically Erasable Programmable Read-Only (EEPROMs) on memory modules.

32. A Serial Presence Detect (SPD) content creation system, comprising:  
a SPD data store having a searchable industry standard for defining SPD contents and SPD tokens associated with values for the SPD contents based on rules;  
an SPD creator to interface with an SPD creation interface and the SPD data store, where the SPD creator receives identifiers for memory modules and searches the SPD data store in response to the identifiers to obtain appropriate ones of the SPD tokens, values, and rules, and wherein the SPD creator generates instances of the SPD contents based on interactions with the SPD creation interface and the SPD data store.

33. The SPD content creation system of claim 32 further comprising an Electrically Erasable Programmable Read-Only Memory (EEPROM) configuration module that interfaces with the SPD creator to write configuration instances of the SPD contents to EEPROMs on the memory modules.

34. The SPD creation system of claim 33 further comprising a label generator that generates labels for the memory modules based on industry standards for labels associated with the memory modules.

35. The SPD creation system of claim 32 further comprising a SPD string generator that generates instances of SPD-strings having a select number of the SPD tokens for the SPD creator based on the identifiers.

36. The SPD creation system of claim 35 further comprising an SPD string data store that houses select ones of the instances of SPD strings based on the identifiers for the SPD string generator.

37. A Serial Presence Detect (SPD) creation system, comprising:  
a SPD data store;  
a SPD string generator;  
a SPD creation interface; and  
a SPD creator;  
wherein the SPD creation interface receives a memory module identifier for a Electrically Erasable Programmable Read-Only (EEPROM) on the memory module, wherein the SPD creation interfaces transmits the memory module identifier to the SPD string generator, the SPD string generator generates a SPD tokenized string having a plurality of SPD tokens and transmits the SPD tokenized string to the SPD creator, the SPD creator parses the SPD tokenized string for each of the SPD tokens and uses each token as a search into the SPD data store, for each search the SPD data store returns to the SPD creator one or more rules and one or more values for SPD contents associated with each search, and wherein the SPD creator in response to the returned one or more of the rules and one or more of the values generates an instance of SPD contents for the EEPROM on the memory module.

38. The SPD creation system of claim 37 wherein in response to one or more of the rules the SPD creator prompts the SPD creator interface to select from one or more of the values.

39. The SPD creation system of claim 36 further comprising an EEPROM configuration module that receives the instance of SPD contents from the SPD creator and configures the SPD contents to the EEPROM on the memory module.

40. The SPD creation system of claim 39 wherein the EEPROM configuration module batches the instance of SPD contents and one or more additional instances of SPD contents received from the SPD creator before writing the SPD contents and one or more additional SPD contents to the EEPROM on the memory module and one or more additional EEPROMs on additional memory modules until a threshold

number of SPD contents and one or more additional SPD contents are received from SPD creator.

41. The SPD creation system of claim 39 wherein the EEPROM configuration module batches the instance of SPD contents received from the SPD creator before configuring the SPD contents and configures the instance of SPD contents to the EEPROM on the memory module when a predefined event occurs.

42. The SPD creation system of claim 41 wherein the predefined event is at least one of a pre-defined time of day, a predefined calendar date, and predefined authorization.

43. An Electrically Erasable Programmable Read-Only Memory (EEPROM) on a memory module, comprising:

SPD contents for a defined memory module, and

wherein the SPD contents where automatically generated for the defined memory module based on an industry standard for the SPD contents, wherein the industry standard is electronically represented as SPD tokens and rules associated with values for the SPD contents and selected ones of the SPD tokens are determined by an identifier associated with the defined memory module.

44. The EEPROM on the memory module of claim 43 wherein a programmatic label is automatically generated and affixed to the memory module based on an electronic version of an industry standard for memory module labels.

45. The EEPROM on the memory module of claim 43 wherein identifier includes a number of the SPD tokens that represent at least one of a vendor for the EEPROM on the memory module, a total number of memory components needed for the EEPROM on the memory module, physical characteristics of the components, and performance characteristics of the components.